

**REMARKS**

By this Amendment, Applicants have amended claims 24, 29, 31-33, and 45.

Upon entry of this Amendment, claims 24-47 are pending and under examination. For the reasons presented herein, Applicants traverse the objection and rejections set forth in the Office Action<sup>1</sup>, wherein the Examiner:

- (a) objected to claims 25, 26, 29, and 31-35 because of informalities;
- (b) rejected claims 44, 45, and 47 under 35 U.S.C. § 112, second paragraph, as being indefinite;
- (c) rejected claims 24-39 and 42-47 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Applic. Pub. No. 2004/0127224 ("Furukawa") in view of U.S. Patent Applic. Pub. No. 2003/0087641 ("Gustafsson"); and
- (d) rejected claims 40 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Furukawa in view of Gustafsson, and further in view of U.S. Patent Applic. Pub. No. 2003/0123425 ("Walton");

**Objection to Claims 25, 26, 29, and 31-35**

The Examiner objected to the use of the term "neighborhood," and requested further clarification of the term. See Office Action, p. 2. In response, Applicants respectfully direct the Examiner's attention to Applicants' disclosure of "[t]he procedure for building a neighbourhood of nearby solutions," on pages 34-38 of Applicants' specification. This disclosure sufficiently describes this term as used in claims 25, 26, 29, 36, 40 and 41.

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<sup>1</sup> The Office Action contains statements characterizing the related art and the claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

Similarly, the Examiner objected to the use of the term "previous items." See Office Action, p. 2. In response, Applicants have amended claim 29 to remove this phrase from the claim.

Finally, the Examiner objected to the use of the term "enriched." See Office Action, p. 2. In response, Applicants have amended claims 31-33 to clarify this term.

Applicants deem the objections to the claims overcome and request their withdrawal.

**Regarding the 35 U.S.C. § 112 Rejection of Claims 44, 45, and 47**

The Examiner rejected claims 44, 45, and 47 for indefiniteness. See Office Action, p. 2. In response, Applicants submit that claims 44, 45, and 47 are proper claims in accordance with M.P.E.P. § 2173.05(f). Particularly, M.P.E.P. § 2173.05(f) notes that "[a] claim which makes reference to a preceding claim to define a limitation is an acceptable claim construction which should not necessarily be rejected as improper or confusing under 35 U.S.C. § 112, second paragraph."

Accordingly, Applicants request the Examiner's reconsideration and withdrawal of this rejection.

**Regarding the 35 U.S.C. § 103(a) Rejection of Claims 24-39 and 42-47**

Applicants request reconsideration and withdrawal of the rejection of claims 24-39 and 42-47 under 35 U.S.C. § 103(a) as being unpatentable over Furukawa in view of Gustafsson.

The Examiner has not properly resolved the *Graham* factual inquiries, the proper resolution of which is the requirement for establishing a framework for an objective obviousness analysis. See M.P.E.P. § 2141(II), citing to *Graham v. John Deere Co.*,

383 U.S. 1, 148 USPQ 459 (1966), as reiterated by the U.S. Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007). Specifically, the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention, at least because he has not interpreted the prior art and considered both the invention and the prior art as a whole. See M.P.E.P. § 2141(II)(B). Particularly, Furukawa and Gustafsson, taken alone or in combination, fail to teach or suggest at least Applicants' claimed "said steps of building and optimising the initial solution being adapted to define solutions having a geographic coverage wider than a predefined minimum coverage area and being adapted to manage an amount of traffic greater than a predefined minimum value of expected traffic," as recited in independent claim 24.

The Examiner admitted that Furukawa "fails to explicitly recite" Applicants' claimed "said steps of building and optimising the initial solution being adapted to define solutions having a geographic coverage wider than a predefined minimum coverage area and being adapted to manage an amount of traffic greater than a predefined minimum value of expected traffic" (claim 24). See also Office Action, pp. 3-4. The Examiner alleged that Gustafsson teaches this missing element. *Id.* at 4. However, Gustafsson, taken alone or in combination with Furukawa, does not teach or suggest at least this claim element.

Instead, Gustafsson teaches a radio network planning system that proceeds by considering geographical service area, with a specified area being defined as a "pixel." See Gustafsson, Abstract and para. 13. Concerning "pixels," Gustafsson explains:

The service area of the radio network is divided into a grid consisting of such pixels for the planning and/or evaluation

purposes. More service areas, i.e. areas where the operator of the radio network wants to provide services to users, can be present as well. A pixel e.g. measures 500 times 500 metres, preferably 250 times 250 metres, . . . .  
Gustafsson, para. 13.

Given a pixel, Gustafsson then computes the probability of coverage for that pixel by a cell of the radio network. See Gustafsson, Abstract. To aid in the probability calculation, Gustafsson computes a link budget for each pixel. See Gustafsson, para. 9. As Gustafsson explains, "the margin in the link budget, . . . is the additional average transmission power available." Id.

As the Examiner further noted, Gustafsson later discusses "cell breathing." See Office Action p. 4 and Gustafsson para. 16. Gustafsson explains that "[t]he more traffic [that] is carried by a cell, the smaller the coverage area of the cell becomes. Since traffic in a cell will change continuously, the coverage area of the cell will change continuously as well." Gustafsson, para. 16. Mathematically, the significance of cell breathing is captured in the noise rise "k." See Gustafsson, para. 9 and 50.

Finally, Gustafsson discloses that a "coverage condition can be based on a predetermined minimum allowable [link-budget-to-k] ratio . . . ." See Gustafsson, para. 54. The link-budget-to-k ratio appears to be equivalent to a signal-to-noise-ratio. Thus, Gustafsson appears to teach a coverage condition based on a minimum signal-to-noise ratio for each pixel.

As discussed above, "k" mathematically addresses cell breathing, which is related to cell coverage area. However, Applicants' claim language does not read on Gustafsson. For example, consider that the link budget is a function of path loss, and decreases with increasing path loss. See Gustafsson, para. 39. Therefore, specifying a

minimum signal-to-noise ratio would set a maximum coverage area, because the signal-to-noise ratio for pixels with greater path loss would not satisfy the minimum signal-to-noise ratio criteria. Clearly, the claimed minimum signal-to-noise ratio in Gustafsson differs from Applicants' claimed "minimum coverage area," as recited in claim 24, and thus does not cure the deficiencies of Furukawa.

Therefore, contrary to the Examiner's allegations on p. 4 of the Office Action, Gustafsson also does not teach or suggest at least Applicants' claimed "said steps of building and optimising the initial solution being adapted to define solutions having a geographic coverage wider than a predefined minimum coverage area and being adapted to manage an amount of traffic greater than a predefined minimum value of expected traffic," as recited in claim 24, and thus does not cure the deficiencies of Furukawa.

In addition, neither Furukawa or Gustafsson, whether taken alone or in combination, teaches or suggests:

. . . building an initial solution comprising a subset of sites obtained by starting from a potential network configuration comprising as active the whole set of candidate sites, wherein the initial solution comprises compulsorily active cells corresponding to already active cells in the physical network . . . .

as recited in amended independent claim 24 (emphasis added). This amended language is supported by Applicants' specification at, for example, page 8, line 25, to page 9, line 4, and also on page 11, lines 9-13.

Although Furukawa discusses an "already installed base station" (see, for example, para. 118), by the term "already installed base station," Furukawa is discussing cells that are considered already installed in the software. That is, these

cells do not correspond to actual physical cells, but merely to saved software emulated cells. (For further evidence, see, for example, paragraph 118 in which Furukawa discloses "an already-installed base station is assumed to be deleted.")

Thus, Furukawa and Gustafsson, taken alone or in combination, do not render obvious Applicants' independent claim 24. In view of the reasoning presented above, Applicants therefore submit that independent claim 24 is not obvious and should therefore be allowable. Dependent claims 25-39 and 42-47 should also be allowable at least by virtue of their dependence from non-obvious base claim 24. Accordingly, Applicants request withdrawal of the 35 U.S.C. § 103(a) rejection.

**Rejection of Claims 40 and 41 under 35 U.S.C. § 103(a)**

Applicants request reconsideration and withdrawal of the rejection of claims 40 and 41 under 35 U.S.C. § 103(a) as being unpatentable over Furukawa in view of Gustafsson, and in further view of Walton.

As discussed in the previous section, the cited references do not render obvious Applicants' independent claim 24, at least because the Examiner has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claimed invention. In particular, the cited references do not teach or suggest at least the above-quoted elements of Applicants' independent claim 24. The Examiner's addition of Walton as to dependent claims 40 and 41 does not alter the reasoning presented in the previous section. For example, Walton, which is directed towards improved controlling of communications systems (see Walton, Abstract and Summary of the Invention), does not cure the aforementioned deficiencies of Furukawa and Gustafsson.

For at least the above reasons, Applicants' dependent claims 40 and 41 should be allowable at least by virtue of their respective dependence from base claim 24. Applicants therefore request withdrawal of the 35 U.S.C. § 103(a) rejection.

**Conclusion**

Applicants respectfully request reconsideration of the application and withdrawal of the rejections and objections. Pending claims 24-47 are not rendered obvious by the cited references. Accordingly, Applicants request allowance of the pending claims.

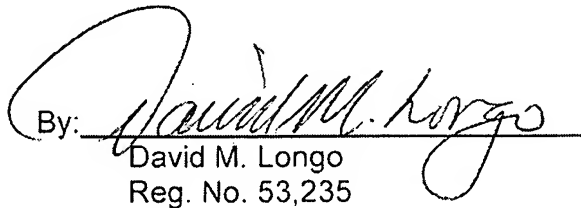
If there are any remaining issues or misunderstandings, Applicants request the Examiner telephone the undersigned representative to discuss them.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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